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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,987	08/23/2001	Christoph Schnitter	Mo-6430/STA-168	1536

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EXAMINER

HA, NGUYEN T

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/935,987

Applicant(s)
Schnitter et al.

Examiner
Nguyen Ha

Art Unit
2831



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 3, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Response to Arguments

1. The applicant's arguments filed on 9/3/2002 are persuasive in overcoming the rejection of record. Therefore, the previous office action is hereby withdrawn. However, in view of the new prior art the examiner decides to make another rejection.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because on page 11, line 3, "comprising" is legal phraseology.

4. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

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5. Claims 1 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Fife (6,322,912).

Regarding claim 1, Fife discloses an anode comprising a niobium metal core (column 1 lines 35-44), a conducting niobium suboxide layer or NbO (column 4 lines 52&53) and a dielectric barrier layer comprising niobium pentoxide or Ni_2O_5 (column 8 line 38).

Regarding claim 1, Fife discloses a capacitor comprising an anode wherein an anode comprises a niobium metal core (column 1 lines 35-44), a conducting niobium suboxide layer or NbO (column 4 lines 52&53) and a dielectric barrier layer comprising niobium pentoxide or Ni_2O_5 (column 8 line 38).

6. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al (6,215,652).

Regarding claims 4, Yoshida discloses comprising sintering niobium metal powders (13) and electrolytically producing a dielectric barrier layer (16) on a surface of a sintered body, . It is inherent that the electrolytic capacitor comprising an aqueous solution of organic acid containing an anion.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fife (6,322,912) in view of Loffelholz et al (6,136,062).

Regarding claim 2, Fife discloses all the limitations discussed above with respect to claim 1, except for the anode wherein the anode has a tantalum content in the dielectric barrier layer ranging from about 1500 to about 12000 ppm, relative to the anode. However, Loffelholz et al teaches the anode comprising a tantalum content from 1000 to 12000 ppm (column 6 line 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Fife anode as taught by Loffelholz to have the tantalum content for the anode from 1000 to 12000 ppm in order to use under high temperature and reduce the current leakage.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (6,215,652) in view of Loffelholz et al (6,136,062).

Regarding claim 5, Yoshida discloses all the limitations discussed above with respect to claim 4, except for an electrolyte comprises a tantalum oxalate solution. However, Loffelholz et al teaches tantalum oxalate solution (column 6 lines 16-18). It would have been obvious to one

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having ordinary skill in the art at the time the invention was made to modify the Yoshida as taught by Loffelholz to have the tantalum oxalate solution in the electrolyte capacitor in order to use under high temperature with less leakage current.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fife (6,322,912).

Regarding claim 3, Fife discloses all the limitation discussed above with respect to claim 1, except for the anode wherein the suboxide layer has a thickness that is at least about 50 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the anode wherein the suboxide layer has a thickness that is at least about 50 nm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. **In re Boesch, 617, F.2d 272, 205 USPQ 215 (CCPA 1980).**

11. Claims 6&7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (6,215,652).

Regarding claims 6&7, the teaching of Yoshida includes all the limitations discussed above in claim 4, except for the electrolyte has a conductivity ranging from about 0.15 to about 25 mS/cm or electrolyte is at least about 5 mS/cm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the electrolyte has a conductivity ranging from about 0.15 to about 25 mS/cm or electrolyte is at least about 5 mS/cm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. **In re Aller, 105 USPQ 233.**

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Citation Relevant of Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kimmel et al discloses a method to partially reduce a niobium metal oxide and oxygen reduced niobium.
- b. Naito discloses a capacitor comprising niobium.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ha whose telephone number is (703)-308-6023 Monday to Friday from 8:30 to 6:00PM.

Any attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard , can be reached on (703) 308-3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.

NH

11/25/2002

Hung V Ngo

**HUNG V. NGO
PATENT EXAMINER**